REMARKS/ARGUMENT

The applicants' attorneys appreciate the Examiner's thorough search and comments.

Claims 10-12 have been cancelled. Claims 1-9 are pending consideration.

Claims 1-12 were rejected under 35 U.S.C. §112, second paragraph, for containing indefinite terms. Specifically, it was set forth that the limitation "said first surface, said first layer and said second layer having generally coincident boundaries" is not clear. This limitation has been deleted from the claims. Reconsideration is requested.

Claims 1-9 were rejected under 35 U.S.C. §102(b) as being anticipated by Merrill et al., U.S. Patent No. 5,661,314. It was set forth that Merrill et al. show each of the limitations in claims 1-9.

With respect to claim 1, it was set forth that Merrill et al. show, among other limitations, a first epitaxial silicon layer (52) and a second epitaxial silicon layer (180).

Claim 1 provides for "a second layer...having impurities of the same type as those in said first layer uniformly distributed therethrough and having a substantially uniform resistivity". It should be noted that the phrase "having a substantially uniform resistivity" is not being added to further limit the claim, but to point out a feature that was inherent in the claimed invention. It is respectfully submitted that the layer (180) (See Fig. 20) in Merrill et al. is not an epitaxial silicon layer and does not include a uniform concentration of doping impurities and therefore would not exhibit substantially uniform resistivity. Merrill et al. teach that layer 180 in Fig. 20 is in fact a solid "well diffusion" N+ region "which replaces the grid of deepened N+ regions represented by segments 60, 61 and 62 in Fig. 19". Col. 14, lines 57-63. As further explained by Merrill et al., this region 180 is obtained by spreading a blanket of implant over the designated active area of the device and then driven to a depth. As it is well known in the art that this process (diffusion) does not result in a uniform concentration of doping impurities. Rather, it will result in a layer having a gradient of doping concentration which is highest at the surface and decreases toward the interior of the device. This, in turn, results in a resistivity that changes proportionally to the change in the doping concentration of the second layer, rather than a layer that has a uniform resistivity. As explained in the specification of the instant application, by uniform distribution of dopants, which may be achieved by epitaxial growth among the other techniques, uniform resistivity of the second layer may be achieved which in turn leads to the reduction of the on-resistance of a device without sacrificing the blocking voltage. Merrill et al. do not show or suggest a uniform distribution of dopants on the second layer or recognize the importance of uniform resistivity in the second layer for

achieving a lower on-resistance without sacrificing blocking voltage. The beneficial results of having a uniform resistivity in the second layer are explained in the specification, particularly with reference to Fig. 4. Reconsideration of claim 1 is requested.

Claims 2-9 depend from claim 1 and, therefore, include its limitations. These claims include other limitations which in combination with those of claim 1 are not shown or suggested by any art of record. Reconsideration of these claims is requested.

With these amendments the application is now believed to be in condition for allowance. Such action is earnestly solicited.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on March 27, 2001

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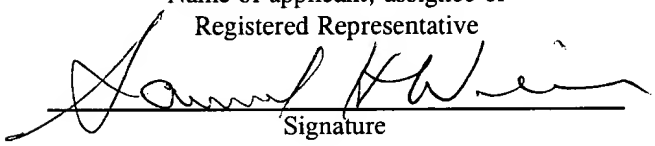

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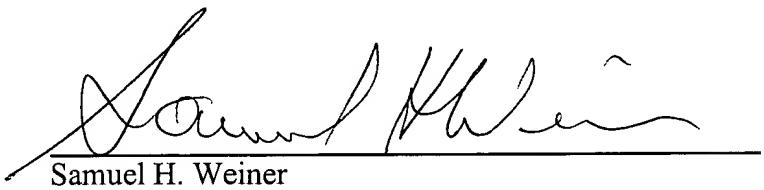
Respectfully submitted,



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